What is claimed is:

1.   1.   A method comprising:

2   generating a first signal having a fundamental frequency;

3   modulating an input signal with the first signal; and

4   tuning the modulation to a harmonic of the fundamental frequency to produce a

5   modulated signal having a carrier frequency near the harmonic.

1.   2.   The method of claim 1, wherein the modulated signal has substantially more

2   spectral energy near the harmonic than near the fundamental frequency.

1.   3.   The method of claim 1, wherein the tuning comprises:

2   establishing a filtering passband for the modulation, the passband including

3   frequencies near the harmonic.

4.   The method of claim 1, wherein the tuning comprises:

filtering out spectral energy of the modulated signal near the fundamental frequency.

5.   The method of claim 1, wherein the harmonic comprises an odd harmonic.

6.   The method of claim 1, wherein the input signal comprises a complex signal.

1.   7.   The method of claim 1, wherein the modulating comprises:

2   providing the input signal and the carrier signal to at least one Gilbert cell multiplier.

1.   8.   The method of claim 1, wherein the tuning comprises:

2   coupling a bandpass filter to output terminals of at least one Gilbert cell multiplier.

1   9.   A system comprising:

2   an oscillator to generate a first signal having a fundamental frequency;

3   a modulator to modulate an input signal with the first signal; and

4   a filter coupled to the modulator to tune the modulation to a harmonic of the

5 fundamental frequency to produce a modulated signal having a carrier frequency near the

6 harmonic.

1   10.   The system of claim 9, wherein the modulated signal has substantially more

2 spectral energy near the harmonic than near the fundamental frequency.

1   11.   The system of claim 9, wherein the filter establishes a passband for the

2 modulation, the passband including frequencies near the harmonic.

     12.   The system of claim 9, wherein the filter filters out spectral energy located

2 near the fundamental frequency.

     13.   The system of claim 9, wherein the harmonic comprises an odd harmonic.

     14.   The system of claim 9, wherein the input signal comprises a complex signal.

     15.   The system of claim 9, wherein the modulator comprises at least one Gilbert

2 cell multiplier.

1   16.   The system of claim 9, wherein the filter comprises a band pass filter.

1   17.   A transmitter comprising:

2   a modulation system to:

3   receive a first signal having a fundamental frequency,

4   receive an input signal, and

5   modulate the input signal with the first signal to produce a modulated signal

6   having a carrier frequency near a harmonic of the fundamental frequency of the first signal;

7   and

8   circuitry to communicate the modulated signal to a communication medium.

1   18.   The transmitter of claim 17, wherein the modulation system comprises:

2   a modulator to modulate the input signal with the first signal; and

3   a filter coupled to the modulator to tune in the modulation to a harmonic of the

4   fundamental frequency to produce the modulated signal.

1   19.   The transmitter of claim 18, wherein the filter establishes a passband for the

2   modulation, the passband including frequencies near the harmonic.

1   20.   The transmitter of claim 18, wherein the filter filters out spectral energy of the

2   second signal located near the fundamental frequency.

1   21.   The transmitter of claim 18, wherein the filter comprises a bandpass filter.

1   22.   The transmitter of claim 17, wherein the harmonic comprises an odd

2   harmonic.

1   23.   The transmitter of claim 17, wherein the input signal comprises a complex

2   signal.

1   24.   The transmitter of claim 17, wherein the modulator comprises at least one

2   Gilbert cell multiplier.

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1   25.   A method comprising:

2   receiving a first signal having a fundamental frequency; and

3   modulating an input signal with the first signal to produce a modulated signal having

4   a carrier frequency near a harmonic of the first signal.

1   26.   The method of claim 25, wherein the modulated signal has substantially more

2   spectral energy near the harmonic than near the fundamental frequency.

1   27.   The method of claim 25, further comprising:

2   filtering out spectral energy located near the fundamental frequency.

1   28.   The method of claim 25, further comprising:

2   tuning a filter to pass spectral energy of the modulated signal located near the carrier

3   frequency.

     29.   The method of claim 25, wherein the harmonic comprises a third harmonic.

     30.   The method of claim 25, wherein the modulating comprises:

     providing the input signal and the carrier signal to at least one Gilbert cell multiplier.